

Attorney Docket #10011474-1

Remarks/Arguments

Claims 1-15 and 17-18 remain in this application. Claims 1 and 4 have been amended and claim 16 was previously canceled.

Applicant gratefully acknowledges the allowance of claims 15, 17 and 18, the acceptance of the drawings filed on February 19, 2002, and the approval of the drawing correction filed on March 8, 2004. Applicant asks the Examiner to accept the Amendments to the specification presented in the prior office action response filed on March 8, 2004 in response to informalities made by the Examiner in the prior Office Action dated December 9, 2003. No new matter was introduced in those Amendments to the specification. In the final Office Action dated July 6, 2004, the Examiner did not state whether or not the Amendments to the specification were acceptable.

The Examiner rejected claims 1-5, 11 and 13 as being anticipated under 35 U.S.C. 102 by US Patent #6,078,440 to Ueyama (hereinafter, the Ueyama reference). The Examiner also stated that in the Ueyama reference the curved surface is secured on the sphere (as recited in claim 1 of the present application) because otherwise the sphere will be freely rotating within the housing and there would be no control for moving the sphere in any direction. The Examiner's attention is directed to column 4, lines 29-41 of the Ueyama reference. The rotatably pivoting image pickup unit 10 has a spherical surface 15 in contact with the balls 26. It is stated that "when the balls 26 roll on the convex spherical surface 15 of the image pickup units 10, friction forces acting between the image pickup unit 10 and the balls 26 is [sic] very small. Thus, the image pickup unit 10 can be moved by a very small driving force." As described later in column 4, lines 58-66, the driving mechanism 30 has the friction member 32 for changing the position of the image pickup unit 10. Accordingly, the balls 26 rotationally support the image pickup unit 10 with small frictional forces and the friction member 32 moves the image pickup unit 10. The friction member 32 must also hold the image pickup unit 10 in place when no motion is desired since only a "very small driving force" is needed to move the image pickup unit 10. In column 4, line 34-35 of the Ueyama reference, it is stated that the "balls 26 constitute ball bearings." As a result, one teaching of the Ueyama reference is that the image pickup unit 10 is essentially freely rotating within the housing as is the

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usual function of a ball bearing structure. The balls 26 do not have a primary function of keeping the image pickup unit 10 from rotating.

The present invention is very different. There is no driving mechanism used to hold the sphere in place. The alignment tool recited in claim 11 is only for rotating the sphere and not for holding it in place. The Examiner mentioned that in regard to claims 6-10 of the present application, the prior art fails to teach the use of a lid to apply a force onto the two sets of balls and the sphere. Claim 1 has been amended to recite a force-generating member that applies a force to the two sets of balls for resisting changes in the position of the sphere.

The Examiner rejected claim 12 under 35 U.S.C. 103 as being unpatentable over the Ueyama reference in view of US Patent #4,552,024 to Baker, et al (hereinafter, the Baker reference). While the Baker reference teaches spheroid ball bearings having special surface finish, Applicant respectfully traverses the Examiner's statement that the surface finish permits smooth rotation. The device disclosed in the Baker reference is for analyzing the strength of tool bits. The curvilinear members 11-14 having the special surface finish are not for supporting the tool bit to rotate like the image pickup member 10 of the Ueyama reference. Those curvilinear members 11-14 and the tool bit 16 are both constrained. As a result, there is no reason to combine the two prior art references except by using the teaching of the present invention. Furthermore, Applicant believes that applying the teaching of the Baker reference to the Ueyama device results in reducing the driving force for changing the position of the image pickup unit 10. Such combination thus teaches away from the present invention where the curved surfaces and the force combine to maintain the position of the sphere.

Applicant submits that the Ueyama and the Baker references, individually or in combination, do not teach nor suggest the invention recited in the present application.

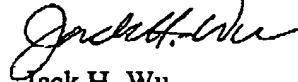
If there are any further questions or if more discussion is required, the Examiner is invited to call Applicant's agent at the telephone number given below.

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In view of the above, the claims presented in this response are believed to be distinct over the cited references and in condition for allowance. Accordingly, it is respectfully requested that such allowance be granted at any early date.

Respectfully submitted,

Kenneth J. Wayne



Jack H. Wu

Patent Reg. No. 29,992

September 7, 2004

**Agilent Technologies****Legal Department, DL429****Intellectual Property Administration**

P.O. Box 7599

Loveland, CO 80537-0599

(408) 553-3060 telephone

(408) 553-3063 facsimile

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